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Subject: Environmental Defense comments on Benzenemethanethiol (CAS# 100-53-8)

(Submitted via Internet 8/17/04 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, lucierg@msn.com and Santav@cpchem.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for Benzenemethanethiol (CAS# 100-53-8).

The test plan and robust summaries for benzenemethanethiol (BZM) were submitted by Chevron Phillips Chemical Company. The submission was well-organized and presents adequate descriptions of the relevant studies and justifications for proposed testing. The sponsor proposes several additional studies needed to address gaps in SIDS endpoints.

We agree with the proposed studies and we also agree with the sponsor that ? with the caveats noted in comments #3, 4 and 7 below ? existing data and the new studies together are sufficient to meet HPV requirements. We do, however, have several comments regarding the test plan and robust summaries as follows:

1. According to the test plan, BZM is manufactured by Chevron and transported in closed containers for use in the manufacture of agricultural pesticides. Existing data on aquatic toxicity indicate that BZM possesses a high degree of aquatic toxicity, but no information is provided on the presence of BZM in environmental samples in the vicinity of where it is made or used.

2. The sponsor indicates that it had originally planned on requesting that BZM be considered a closed system intermediate, but changed its mind because use of the chemical is not site-limited and because it is also used as a food additive. Its use as a food additive is inconsistent with other information in the test plan, which asserts that BZM is likely not an environmental problem because it has a strong malodor at low concentrations. Is there an explanation for this inconsistency?

3. The test plan relies on data from a surrogate chemical, thiophenol, to fulfill some of the SIDS endpoints. While we agree that the use of thiophenol is reasonable, we request that additional justification be provided. In particular, we request that comparative metabolism data be included in the revised test plan along with any comparative data on in vitro toxicity.

4. The test plan and robust summaries indicate that there are no repeat dose studies on BZM, and hence one is proposed. Reproductive and developmental toxicity endpoints are addressed by using data from thiophenol studies. The sponsor may wish to consider conducting a combined repeat dose/reproductive/developmental study on BZM, although the thiophenol data are adequate in our view because it is likely that thiophenol is more toxic than BZM.

5. The test plan states that thiophenol is not a selective reproductive toxicant because the observed reproductive effects (spermatogenesis and sperm motility) occur at doses equal to or greater than doses that cause hepatotoxicity. We have three problems with this assertion: it doesn't make sense toxicologically; a NOAEL for reproductive effects was not achieved; and the nature of the hepatic and renal effects were not described, as no repeat dose studies are available on BZM.

6. We agree with the proposal to conduct the fish and other aquatic toxicity studies on BZM even though model estimates are available. The sponsor correctly notes that the model data are inconsistent.

7. The test plan indicates that EPIWIN models predict that BZM is not biodegradable, but it is concluded that it would be biodegradable under real world conditions. What is the basis for this assertion? This is an important point because BZM appears to exert a high degree of aquatic toxicity.

Thank you for this opportunity to comment.

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